648FX-AL
648FX-ALE

Rev. A+

System Board User's Manual
Carte Mère Manuel Pour Utilisateur
System-Platine Benutzerhandbuch
Manual del Usuario de Placas Base
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935-648FX1-000
73310333

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Caution

To avoid damage to the system:

- Use the correct AC input voltage range.

To reduce the risk of electric shock:

- Unplug the power cord before removing the system chassis cover for installation or servicing. After installation or servicing, cover the system chassis before plugging the power cord.

Battery:

- Danger of explosion if battery incorrectly replaced.
- Replace only with the same or equivalent type recommend by the manufacturer.
- Dispose of used batteries according to the battery manufacturer's instructions.

Joystick or MIDI port:

- Do not use any joystick or MIDI device that requires more than 10A current at 5V DC. There is a risk of fire for devices that exceed this limit.

FCC and DOC Statement on Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

Notice:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. Shielded interface cables must be used in order to comply with the emission limits.

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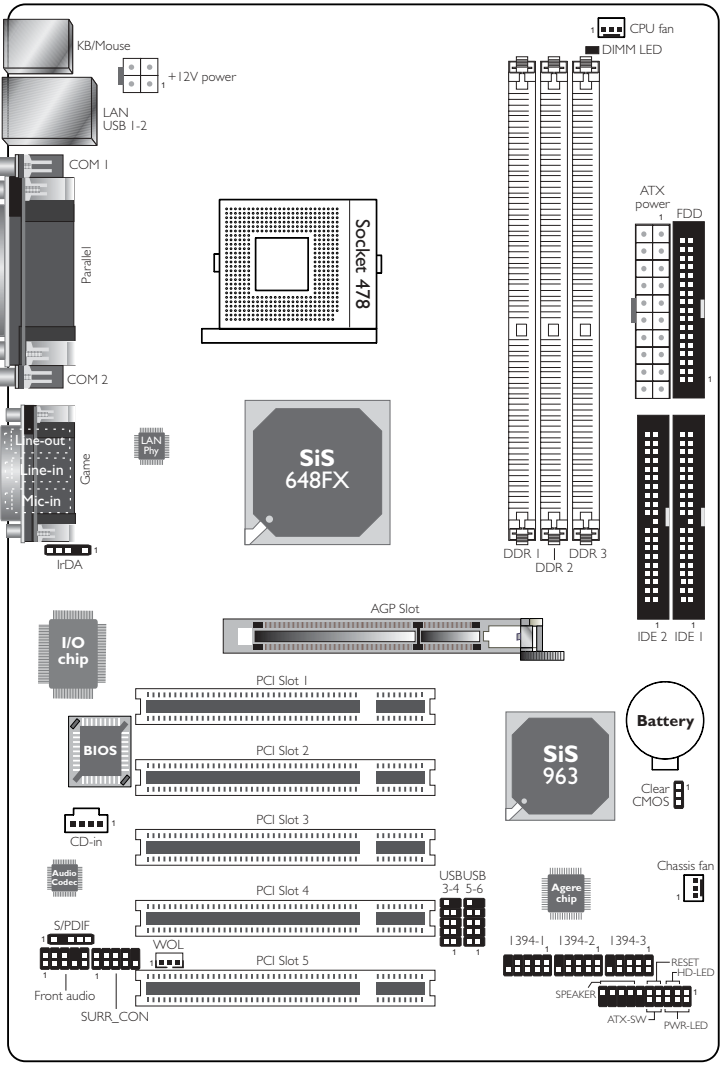
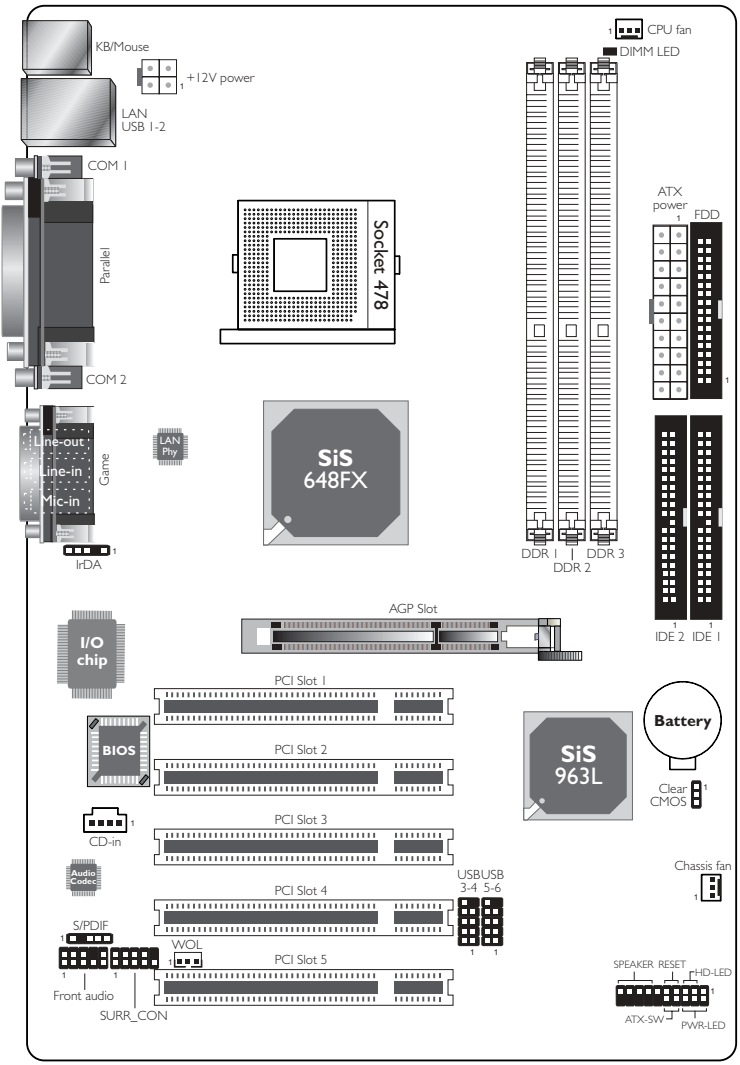
Chapter 1 - Quick Setup Guide

1.1 System Board Layout



648FX-AL
(Supports onboard IEEE 1394A)

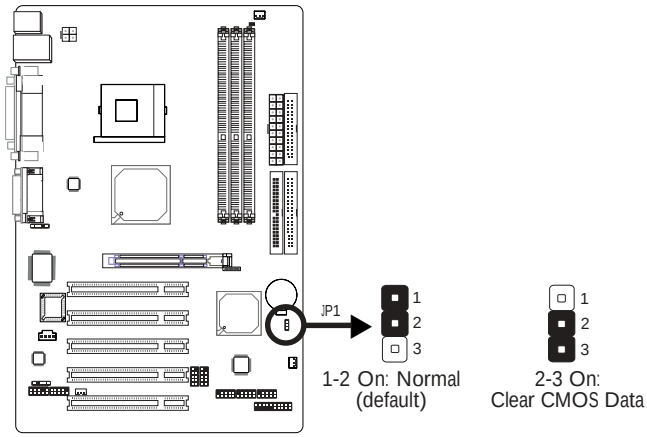


648FX-ALE

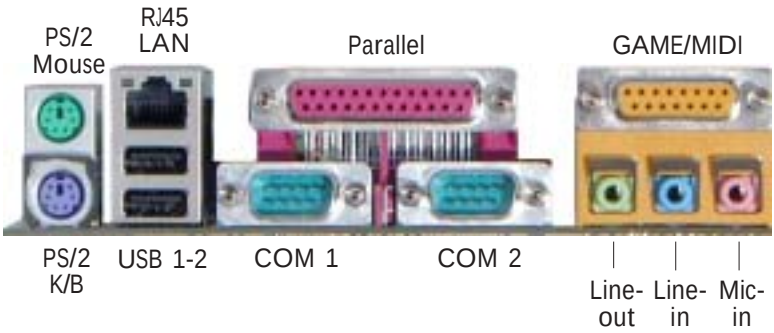
Note:
The illustrations on the following pages are based on the system board that supports onboard IEEE 1394A.

1.2 Jumper

1.2.1 Clear CMOS Data



1.3 Rear Panel I/O Ports

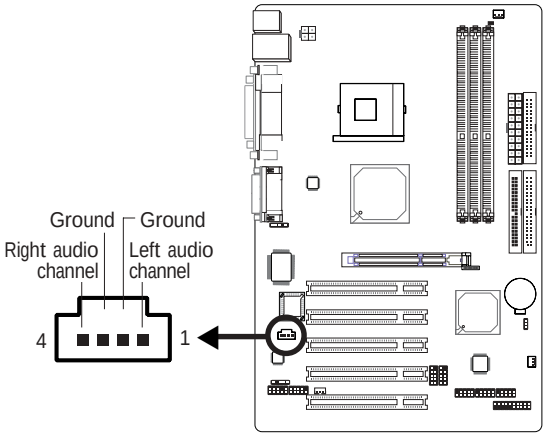


The rear panel I/O ports consist of the following:

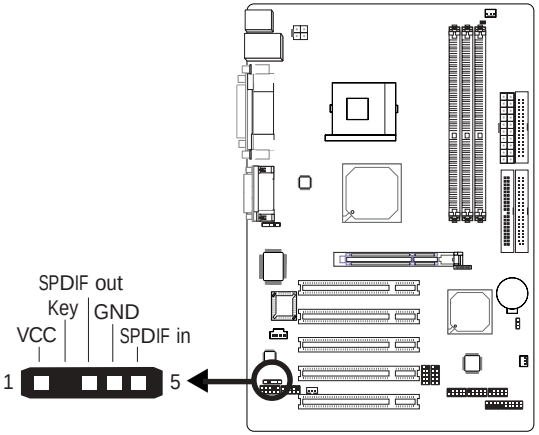
- PS/2 mouse port
- PS/2 keyboard port
- LAN port
- USB ports
- Parallel port
- Serial ports
- Game/MIDI port
- Line-out, line-in and mic-in jacks

1.4 I/O Connectors

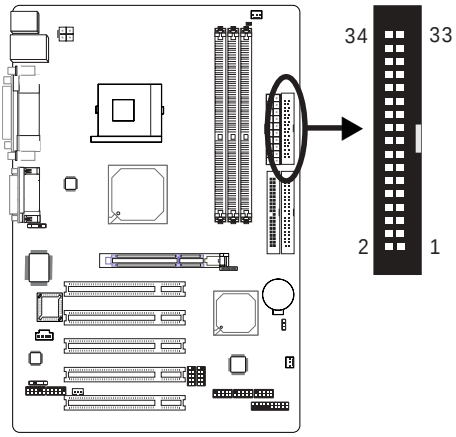
1.4.1 CD-in Internal Audio Connector



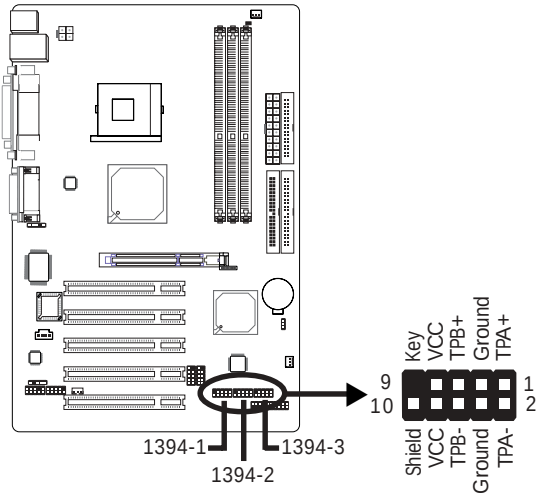
1.4.2 S/PDIF Connector



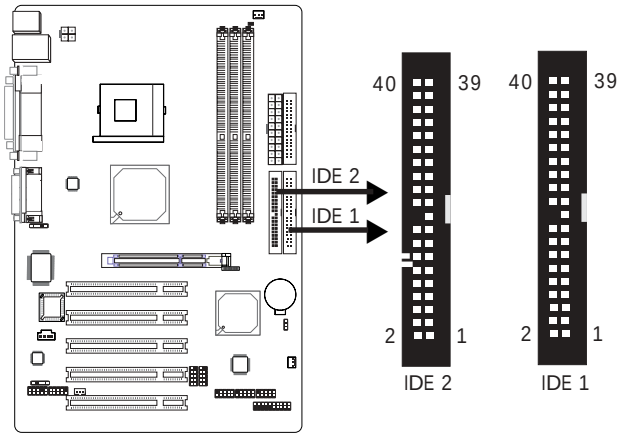
1.4.3 Floppy Disk Drive Connector



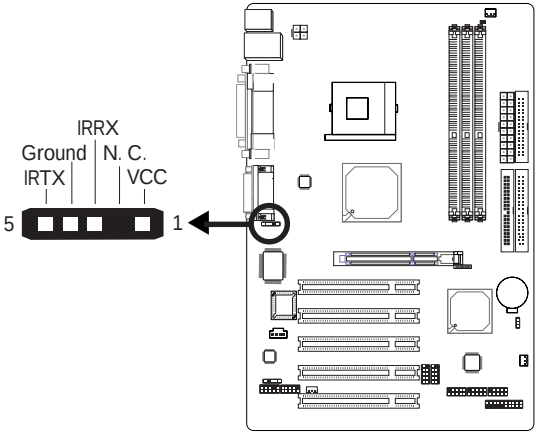
1.4.4 IEEE 1394A Connectors (648FX-AL only)



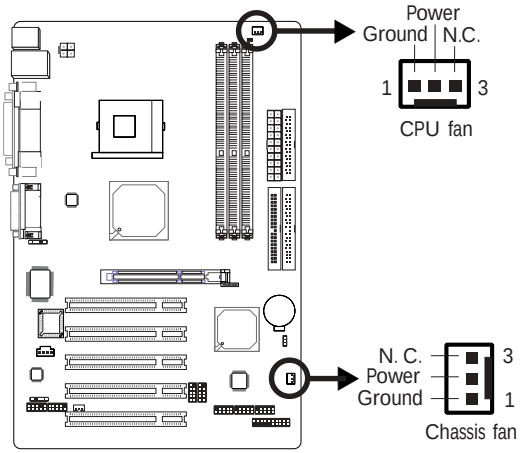
1.4.5 IDE Disk Drive Connector



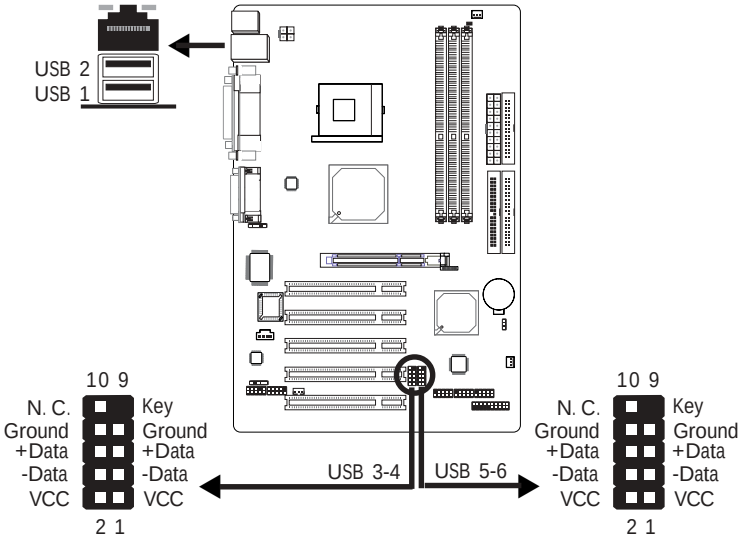
1.4.6 IrDA Connector



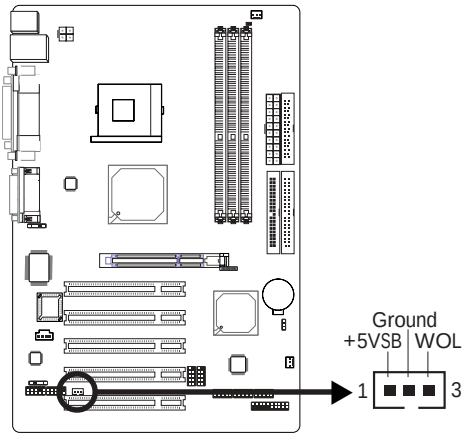
1.4.7 Fan Connectors



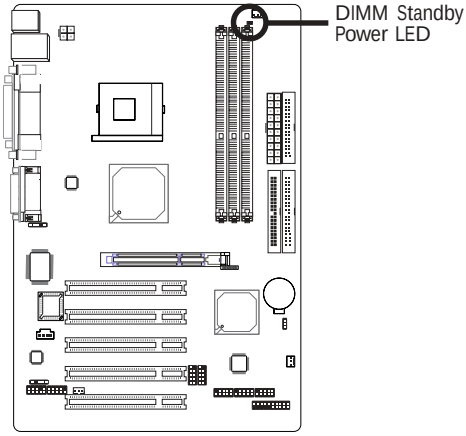
1.4.8 USB Connectors



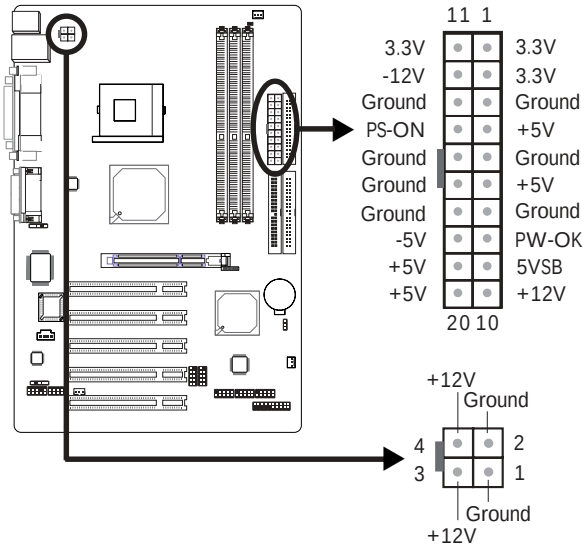
1.4.9 Wake-On-LAN Connector



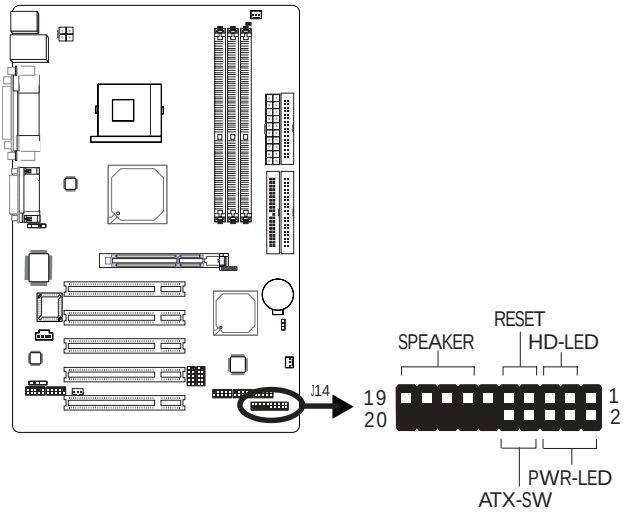
1.4.10 DIMM Standby Power LED



1.4.11 Power Connectors



1.4.12 Front Panel Connectors



	Pin	Pin Assignment
HD-LED (Primary/Secondary IDE LED)	3 5	HDD LED Power HDD
Reserved	14 16	N. C. N. C.
ATX-SW (ATX power switch)	8 10	PWRBT+ PWRBT-
Reserved	18 20	N. C. N. C.
RESET (Reset switch)	7 9	Ground H/W Reset
SPEAKER (Speaker connector)	13 15 17 19	Speaker Data N. C. Ground Speaker Power
PWR-LED (Power/Standby LED)	2 4 6	LED Power (+) LED Power (+) LED Power (-) or Standby Signal

Chapter 2 - English

2.1 Features and Specifications

Processor

- Intel® Pentium® 4 Processor with Hyper-Threading Technology
  - 800MHz/533MHz system data bus
- Intel® Pentium® 4 Northwood processor
  - 533MHz/400MHz system data bus
- Intel® Celeron® Northwood processor
  - 400MHz system data bus

Chipset

- 648FX-AL
  - North bridge: SiS® 648FX
  - South bridge: SiS® 963
- 648FX-ALE
  - North bridge: SiS® 648FX
  - South bridge: SiS® 963L

System Memory

- Three 184-pin DDR DIMM sockets
- Supports 6 banks up to 3GB using PC1600 (DDR200), PC2100 (DDR266), PC2700 (DDR333) or PC3200 (DDR400) unbuffered DDR SDRAM DIMM, 2.6V type
- 16Mb, 64Mb, 128Mb, 256Mb and 512Mb SDRAM technology with page size from 2KB up to 16KB

BIOS

- Award BIOS, Windows® 98/2000/ME/XP Plug and Play compatible
- Supports SCSI sequential boot-up
- Flash EPROM for easy BIOS upgrades
- Supports DMI 2.0 function
- 2Mbit flash memory

Energy Efficient Design

- ACPI STR (Suspend to RAM) function
- Wake-On-PS/2 Keyboard/Mouse
- Wake-On-USB Keyboard/Mouse
- Wake-On-Ring (external modem)
- Wake-On-LAN
- RTC timer to power-on the system
- AC power failure recovery

Onboard Audio Features

- AC'97 2.2 extension compliant codec
- Supports Microsoft® DirectSound/DirectSound 3D
- AC'97 supported with full duplex, independent sample rate converter for audio recording and playback
- S/PDIF-in/out interface
- 6-channel audio output

Onboard LAN Features

- Uses Phy fast ethernet controller
- Integrated IEEE 802.3, 10BASE-T and 100BASE-TX compatible PHY
- 32-bit PCI master interface
- Integrated power management functions
- Full duplex support at both 10 and 100 Mbps
- Supports IEEE 802.3u auto-negotiation
- Supports wire for management

PCI Bus Master IDE Controller

- Two PCI IDE interfaces support up to four IDE devices
- Supports ATA/33, ATA/66, ATA/100 and ATA/133 hard drives
- UDMA Modes 3, 4, 5 and 6 Enhanced IDE (data transfer rate up to 133MB/sec.)
- Bus mastering reduces CPU utilization during disk transfer
- Supports ATAPI CD-ROM, LS-120 and ZIP

IEEE 1394A Interface (648FX-AL only)

- Uses Agere FW803 chip
- Supports three 100/200/400 Mb/sec ports

Processor Socket

- Socket 478

AGP (Accelerated Graphics Port)

- Supports AGP 8x up to 2132MB/sec. and AGP 4x up to 1066MB/sec. bandwidth for 3D graphics applications

Rear Panel I/O Ports (PC 99 color-coded connectors)

- 2 USB 2.0/1.1 ports
- 1 RJ45 LAN port
- 2 DB-9 serial ports
- 1 DB-25 parallel port
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 1 game/MIDI port
- 3 audio jacks: line-out, line-in and mic-in

I/O Connectors

- 2 connectors for 4 additional external USB 2.0/1.1 ports
- 3 connectors for 3 external IEEE 1394A ports (648FX-AL only)
- 1 front audio connector for external line-out and mic-in jacks
- 1 CD-in internal audio connector
- 1 S/PDIF-in/out connector
- 1 surround connector
- 1 connector for IrDA interface
- 2 IDE connectors
- 1 floppy drive connector
- 2 ATX power supply connectors
- 1 Wake-On-LAN connector
- CPU fan and chassis fan connectors

Expansion Slots

- 1 AGP slot
- 5 PCI slots

2.2 Package Checklist

The system board package contains the following items:

- ☑ The system board
- ☑ A user's manual
- ☑ One IDE cable for ATA/33, ATA/66, ATA/100 or ATA/133 IDE drives
- ☑ One 34-pin floppy disk drive cable
- ☑ One "Mainboard Utility" CD
- ☐ One card-edge bracket mounted with IEEE 1394A port(s) (648FX-AL only) - optional

If any of these items are missing or damaged, please contact your dealer or sales representative for assistance.

Chapter 3 - Français

3.1 Caractéristiques et Spécifications

Processeur

- Les processeurs Intel® Pentium® 4 avec la Technologie Hyper-Threading - 800MHz/533MHz FSB
- Processeur Intel® Pentium® 4 Northwood
  - 533MHz/400MHz vitesse du bus
- Processeur Intel® Celeron® Northwood
  - 400MHz vitesse du bus

Chipset

- 648FX-AL
  - Pont Nord: SiS® 648FX
  - Pont Sud: SiS® 963
- 648FX-ALE
  - Pont Nord: SiS® 648FX
  - Pont Sud: SiS® 963L

Mémoire Système

- 3 sockets DDR DIMM 184 broches
- Supporte 6 bancs de mémoire jusqu'à 3GB en utilisant les modules PC1600 (DDR200), PC2100 (DDR266), PC2700 (DDR333) ou PC3200 (DDR400) non-tamponnés. DDR SDRAM DIMM, type 2.6V
- Technologie SDRAM 16Mb, 64Mb, 128Mb, 256Mb et 512Mb avec la page de 2KB à 16KB

BIOS

- Compatible avec Award BIOS, Windows® 98/2000/ME/XP Plug and Play
- Supporte l'amorçage séquentiel SCSI
- EPROM Flash pour une mise à niveau facile du BIOS
- Supporte la fonction DMI 2.0
- Mémoire Flash 2Mbit

Design à Haut Rendement Énergétique

- ACPI STR (Suspend to RAM) fonction
- Réveil-Sur-PS/2 Clavier/Souris (Wake-On-PS/2 Keyboard/ Mouse)
- Eveil Clavier/Souris USB (Wake-On-USB Keyboard/Mouse)
- Eveil Sonnerie (Wake-On-Ring)
- Réveil Par Le Réseau (Wake-On-LAN)
- Minuterie RTC pour allumer le système
- Récupération après Défaillance d'Alimentation CA

Caractéristiques Audio sur Carte

- Codec conforme à l'extension AC'97 2.2
- Supporte DirectSound de Microsoft® / DirectSound 3D de Microsoft®
- AC'97 supporté avec full duplex, convertisseur de vitesse d'échantillonnage indépendant pour enregistrement audio et lecture.
- Interface entrée/sortie S/PDIF
- Sortie audio 6-canaux

Fonctionnalités Onboard LAN

- Utilise le contrôleur Phy
- IEEE 802.3, 10BASE-T et 100BASE-TX intégrés compatibles PHY
- Interface maître PCI 32 bits
- Fonctions de gestion d'alimentation intégrées
- Support Full duplex à 10 et 100 Mbps
- Supporte l'auto négociation IEEE 802.3u
- Support câble pour la gestion

Contrôleur IDE de BUS Maître PCI

- Deux interfaces PCI IDE supportant jusqu'à quatre matériels IDE
- Supporte des disques durs ATA/33, ATA/66, ATA/100 et ATA/133
- IDE Améliorés Mode 3, 4, 5 et 6 UDMA (vitesse de transfert de données allant jusqu'à 133Mo/sec.)

- La gestion de Bus réduit l'utilisation du CPU pendant les transferts sur disque
- Supporte les CD-ROM ATAPI, LS-120 et ZIP

Interface IEEE 1394A (648FX-AL seulement)

- Utilisant la puce Agere FW803
- Supportant 3 ports à 100/200/400 Mb/sec

Socket Processeur

- Socket 478

AGP (Accelerated Graphics Port)

- Supporte 8x AGP avec une bande passante allant jusqu'à 2132Mo/sec et 4x AGP avec une bande passante allant jusqu'à 1066Mo/sec pour les applications graphiques 3D

Le Panneau des Ports Entrée/Sortie en Arrière
(Connecteurs PC 99 avec codes couleur)

- 2 ports USB 2.0/1.1
- 1 port RJ45 LAN
- 2 ports série DB-9
- 1 port parallèle DB-25
- 1 port souris PS/2 mini-DIN-6
- 1 port clavier PS/2 mini-DIN-6
- 1 pour jeu/MIDI
- 3 prises audio: ligne de sortie (line-out), ligne d'entrée (line-in) et entrée micro (mic-in)

Connecteurs Entrée/Sortie

- 2 connecteurs pour 4 ports USB 2.0/1.1 supplémentaires
- 3 connecteurs pour 3 ports IEEE 1394A (648FX-AL seulement)
- 1 connecteur audio de l'avant pour la sortie ligne et l'entrée micro
- 1 connecteur CD-in audio internes
- 1 connecteur entrée/sortie S/PDIF
- 1 connecteur surround
- 1 connecteur pour interface IrDA

- 2 connecteurs IDE
- 1 connecteur de lecteur de disquettes
- 2 connecteurs d'alimentation ATX
- 1 connecteur Wake-On-LAN
- Connecteurs de ventilateurs de CPU et de châssis

Logements d'Extension

- 1 slot AGP
- 5 slots PCI

3.2 Liste de Vérification de l'Emballage

L'emballage de la carte système contient les éléments suivants:

- ☑ 1 carte système
- ☑ 1 manuel utilisateur
- ☑ 1 câble IDE pour les lecteurs IDE ATA/33, ATA/66, ATA/100 ou ATA/133
- ☑ 1 câble 34 broches pour lecteur de disquette
- ☑ 1 CD "Mainboard Utility"
- ☐ 1 bracket avec port 1394A (648FX-AL seulement) - optionnel

Si l'un de ces éléments n'était pas dans l'emballage ou s'il était endommagé, veuillez contacter votre revendeur ou votre représentant.

Chapter 4 - Deutsch

4.1 Leistungsmerkmale und Technische Daten

Prozessor

- Intel® Pentium® 4 Prozessor mit Hyper-Threading Technologie - 800MHz/533MHz FSB
- Intel® Pentium® 4 Prozessor Northwood
  - 533MHz/400MHz Systemdatenbus
- Intel® Celeron® Prozessor Northwood
  - 400MHz Systemdatenbus

Chipsatz

- 648FX-AL
  - Nordbrücke: SiS® 648FX
  - Südbrücke: SiS® 963
- 648FX-ALE
  - Nordbrücke: SiS® 648FX
  - Südbrücke: SiS® 963L

Systemspeicher

- 3 184-Stift DDR DIMM Buchsen
- Hält 6 Datenbanken des Speichers bis 3GB durch die Moduln: PC1600 (DDR200), PC2100 (DDR266), PC2700 (DDR333) oder PC3200 (DDR400) ohne Dämpfer DDR SDRAM DIMM, 2.6V-Typ
- 16Mb, 64Mb, 128Mb, 256Mb und 512Mb Technoloqie-SDRAM mit der Seite bis 2KB zu 16KB

BIOS

- Kompatibilität mit Award BIOS, Windows® 98/2000/ME/XP Plug and Play
- Unterstützung des sequentiellen SCSI-Ladens
- Flash EPROM für ein einfaches Aktualisieren des BIOS
- Unterstützung der DMI-2.0-Funktion
- Flash-Speicher (2Mbit)

Energomisches Design

- ACPI STR (Suspend to RAM) funktion
- Wecken bei Betätigung der PS/2 Tastatur/Maus (Wake-On-PS/2 Keyboard/Mouse)
- Wecken bei USB-Tastatur/Maus (Wake-On-USB Keyboard/Mouse)
- Wecken bei Klingeln (Wake-On-Ring)
- Wecken des Systems durch das Netzwerk (Wake-On-LAN)
- RTC-Taktgeber zum Einschalten des Systems
- Wiederherstellung der Wechselstromversorgung nach einem Ausfall

Audiomerkmale auf Platine

- Codec für AC'97 2.2-Erweiterung
- Unterstützung der Microsoft DirectSound/DirectSound 3D
- AC'97 Unterstützung des Audiotreiber und Audiowiedergabe
- S/PDIF-In/Aus-Schnittstelle
- 6-Kanal-Audioausgang

Merkmale des LANs auf Platine

- Benutzung des Phy für die Fast-Ethernet-Verbindung
- Integrierter IEEE 802.3, 10BASE-T und 100BASE-TX kompatibler PHY
- 32-Bit-PCI-Master-Schnittstelle
- Integrierte Power-Management-Funktionen
- Vollduplex-Unterstützung bei 10 und 100 Mbps
- Unterstützung der IEEE-802.3u-Auto-Negotiation
- Unterstützung des Leiters für das Management

PCI-Bus-Master-IDE-Controller

- Unterstützung von bis zu vier IDE-Geräten durch zwei PCI-IDE-Schnittstellen
- Unterstützung der Festplatten ATA/33, ATA/66, ATA/100 und ATA/133
- Erweitertes IDE des UDMA-Modus 3, 4, 5 und 6 (Datenübertragungsgeschwindigkeit von bis zu 133MB/Sek.).
- Verminderte CPU-Benutzung während Diskettenübertragung dank dem Bus-Master
- Unterstützung des ATAPI CD-ROMs, LS-120 und ZIP

IEEE 1394A Schnittstelle (Nur für 648FX-AL)

- Verwendet Agere FW803 Chip
- Unterstützt drei 100/200/400 MB/Sek Porte

Prozessor Socket

- Buchse 478

AGP (Accelerated Graphics Port)

- Für die 3D-Grafikanwendungen unterstützt die universelle AGP-Steckfassung einen AGP 8x mit einer Bandweite von bis zu 2132MB/Sek. sowie einen AGP 4x mit einer Bandweite von bis zu 1066MB/Sek.

Ein-/Ausgabe-Porte an der Rückwand
(PC 99 mit farbkodierten Steckverbindungen)

- 2 USB 2.0/1.1-Anschlüsse
- 1 RJ45 LAN-Anschlüsse
- 2 serieller DB-9-Anschluß
- 1 DB-25-Parallelanschluß
- 1 Mini-DIN-6-Anschluß für eine PS/2-Maus
- 1 Mini-DIN-6-Anschluß für eine PS/2-Tastatur
- 1 game/MIDI Port
- 3 Audio-Anschlußbuchsen: Ausgangsleitung, Eingangsleitung und Mikrofon-Eingang

Ein-/Ausgabe-Steckverbinder

- 2 Anschlußfassung für 4 zusätzliche externe USB 2.0/1.1-Anschlüsse
- 3 Anschlußfassung für 3 zusätzliche externe IEEE 1394A Anschlüsse (Nur für 648FX-AL)
- 1 Frontaudioanschluß für die externe Ausgangsleitung und den Mikrofoneingang
- 1 CD-in interne Audioanschluß
- 1 S/PDIF-in/Aus-Steckverbinder
- 1 surround-Anschlüsse
- 1 Anschluß für die IrDA-Schnittstelle
- 2 IDE-Anschlüsse
- 1 Floppy-Anschlüsse

- 2 Anschlußstecker für das ATX-Netzgerät
- 1 Anschlußstecker für Wecken durch LAN
- CPU- und Chassis-ventilator-Anschlüsse.

Erweiterungssteckfasssungen

- 1 AGP-Einbauplätzen
- 5 PCI-Einbauplätzen

4.2 Verpackungsliste

In der Verpackung der Systemplatine sind folgende Artikel enthalten:

- ☑ 1 Systemplatine
- ☑ 1 Benutzerhandbuch
- ☑ 1 IDE-Kabel für ATA/33-IDE-Laufwerke, ATA/66-IDE-Laufwerke, ATA/100-IDE-Laufwerke oder ATA/133-IDE-Laufwerke
- ☑ 1 Floppylaufwerkskabel mit 34poligen Anschlußstecker
- ☑ 1 CD mit “Mainboard Utility”
- ☐ 1 Bracket mit einem Port 1394A (Nur für 648FX-AL) - zur Option

Fehlt einer dieser Artikel oder weist einer dieser Artikel Beschädigungen auf, wenden Sie sich an Ihren Händler oder Vertreter.

Chapter 5 - Español

5.1 Características y Especificaciones

Procesador

- Procesador Pentium® 4 de Intel® con la Tecnología Hiper-Enhebramiento - 800MHz/533MHz FSB
- Procesador Intel® Pentium® 4 Northwood
  - 533MHz/400MHz Canal de datos del sistema
- Procesador Intel® Celeron® Northwood
  - 400MHz Canal de datos del sistema

Chipset

- 648FX-AL
  - Puente Norte: SiS® 648FX
  - Puente Sur: SiS® 963
- 648FX-ALE
  - Puente Norte: SiS® 648FX
  - Puente Sur: SiS® 963L

Memoria de Sistema

- 3 enchufes de 184-terminales DDR SDRAM DIMM
- Soporta 6 bancos de memoria hasta 3GB usando los módulos PC1600 (DDR200), PC2100 (DDR266), PC2700 (DDR333) o PC3200 (DDR400) no de tope DDR SDRAM DIMM, de 2.6V tipo
- 16Mb, 64Mb, 128Mb, 256Mb y 512Mb SDRAM tecnología con página de 2KB hasta 16KB

BIOS

- Award BIOS, Windows® 98/2000/ME/XP Enchufar y Usar compatible
- Soporta el incio de secuencia de SCSI
- Parpadea EPROM para fácil actualización de BIOS
- Soporta la función de DMI 2.0
- Memoria Instante (2Mbitios)

Diseño Energia Eficiente

- ACPI STR (Suspend to RAM) función
- PS/2 Teclado/Ratón de Wake-On (Wake-On-PS/2 Keyboard/ Mouse)
- Teclado/Ratón de Wake-On-USB (Wake-On-USB Keyboard/ Mouse)
- Wake-On-Ring (external modem)
- Wake-On-LAN
- Temporizador de RTC para encender el sistema
- Recuperación de Fracaso de Energía AC

Características de Audio En Tablero

- AC'97 2.2 extensión complaciente codec
- Soporta DirectSound de Microsoft® / DirectSound 3D de Microsoft®
- AC'97 soporta full duplex, independiente frecuencia de muestreo convertido por audio recording and playback
- Interfáz de S/PDIF-in/out
- Output auricular de 6-canal

Características de LAN Interno

- Utiliza el rápido controlador Ethernet de Phy
- IEEE 802.3, 10BASE-T y 100BASE-TX integrado de PHY compatible
- Interfaz maestro de 32-bit PCI
- Funciones de administración de energía integrado
- Soporte dúplex completo en ambos 10 y 100 Mbps
- Soporta auto negociación de IEEE 802.3u
- Soporta alambre para la administración

Controlador de IDE Maestro de Bus PCI

- Dos interfaces de PCI IDE soporta hasta 4 dispositivos de IDE
- Soporta discos duros ATA/33, ATA/66, ATA/100 y ATA/133
- UDMA modo 3, 4, 5 y 6 ensanchado IDE (la transfererncia de datos es 133MB/sec.)
- Bus mastering reduce la carga a la Unidad Central de Proceso
- Soporta ATAPI CD-ROM, LS-120 y ZIP

Interfaz IEEE 1394A (648FX-AL sólo)

- Usa chip Agere FW803
- Permite tres puertos 100/200/400 Mb/por segundo

Procesador Zócalo

- Zócalo 478

AGP (Accelerated Graphics Port)

- Soporta AGP 8x con 2132MB/sec. y AGP 4x con 1066MB/sec. para las tearjetas 3D

Panel de Reverso de Conectores de Entrada - Salida (Conectores de PC 99 color-cifrado)

- 2 puertos de USB 2.0/1.1
- 1 puerto de RJ45 LAN
- 2 puertos de serie DB-9
- 1 puerto paralelo de DB-25
- 1 puerto de ratón PS/2 mini-DIN-6
- 1 puerto de teclado mini-DIN-6 PS/2
- 1 puerto de juego/MIDI
- 3 enchufes de audio: línea de salida, línea de entrada y mic de entrada

I/O Conectores

- 2 conectores para 4 puertos de USB 2.0/1.1 externo adicional
- 3 conectores para 3 puertos de IEEE 1394A externo (648FX-AL sólo)
- 1 conectador audio delantero para la salida extrema de linea y el micro
- 1 conector de CD-in audio interno
- 1 conector de S/PDIF-in/out
- 1 conector de surround
- 1 conector para interfaz de IrDA
- 2 conectores de IDE
- 1 conector de disquete
- 2 conectores de fuente de alimentación de ATX
- 1 conector de Wake-On-LAN
- 2 conectores de abanicos de CPU y chasis

Ranuras de Expansión

- 1 slot AGP
- 5 slots PCI

5.2 Lista de Chequeo del Paquete

El paquete del tablero de sistema contiene los siguientes artículos:

- ☑ 1 tablero de sistema
- ☑ 1 manual de usuario
- ☑ 1 cable de IDE para las unidades de ATA/33, ATA/66, ATA/100 o ATA/133 IDE
- ☑ 1 cable de unidad de disquete de 34-terminales
- ☑ 1 CD de “Mainboard Utility”
- ☐ 1 placa con puerto 1394A (648FX-AL sólo) - opcional

Si cualquieres de estos artículos están perdidos o dañados, favor de ponerse en contacto con su tratante o representantes de venta para la asistencia.

Ãëàâà 6 - Ðóññêèé ÿçûê

6.1 Õàðàêòåðèñòèêè è ñâîéñòâà

Ïðîöåññîð

- Ïðîöåññîð Intel® Pentium® 4 ñ òåõíîëîãèåé Hyper-Threading - 800MÃö/533MÃö FSB
- Ïðîöåññîð Intel® Pentium® 4 Northwood
  - 533MÃö/400MÃö ñèñòåì íàÿ øèíà
- Ïðîöåññîð Intel® Celeron® Northwood
  - 400MHz ñèñòåì íàÿ øèíà

×èïñåò

- 648FX-AL
  - Ñåâåðíûé Ì îñò: SiS® 648FX
  - Þæíûé Ì îñò: SiS® 963
- 648FX-ALE
  - Ñåâåðíûé Ì îñò: SiS® 648FX
  - Þæíûé Ì îñò: SiS® 963L

Ïàìÿòü

- 3 DIMM ãíåçäà ï îä 184-pin DDR SDRAM
- Ï îääåðæèâàåò 6 áàíêîâ ïàìÿòè äî 3GB ì îäóëÿ ì è PC1600 (DDR200), PC2100 (DDR266), PC2700 (DDR333) èëè PC3200 (DDR400) íåóô. DDR SDRAM DIMM, 2.6V òèïà
- 16Mb, 64Mb, 128Mb, 256Mb è 512Mb SDRAM òåõíîëîãèÿ ñî ñòðàíèöåé îò 2KB äî 16KB

BIOS

- Award BIOS, Windows® 98/2000/ME/XP Plug and Play
- Ï îääåðæèâàåò çàãðóçêó SCSI
- Flash EPROM äëÿ îáíîâëåíèÿ BIOS
- Ï îääåðæèâàåò ôóíêöèþ DMI 2.0
- 2Mbit Flash Ïàìÿòü

Ýíåðãîíåçàâèñèìûé Äèçàéí

- ACPI STR (Suspend to RAM)
- Àêòèâèçàöèÿ Íà Äâèæåíèå Ìûøè (Wake-On-Keyboard/Mouse)
- Àêòèâèçàöèÿ Íà Íàæàòèå Êíîïêè USB Êëàâèàòóðû (Wake-On-USB Keyboard/Mouse)
- Àêòèâèçàöèÿ Íà Âõîäÿùèé Çâîíîê (Wake-On-Ring)
- Àêòèâèçàöèÿ Íà Ñåòåâîå Ñîáûòèå (Wake-On-LAN)
- RTC Òàéìåð äëÿ Âêëþ÷åíèÿ Ñèñòåìû
- Ñêà÷êè Íàïðÿæåíèÿ

Âñòðîåííûé Çâóê

- AC'97 2.2
- Ïîääåðæèâàåò Microsoft® DirectSound / DirectSound 3D
- AC'97 ïîääåðæèâàåòñÿ ñ ïîëíîäóïëåêñíûì, íåçàâèñèìûì êîíâåðòîðîì ÷àñòîòû äëÿ çàïèñè è ïðîèãðûâàíèÿ çâóêà
- èíòåðôåéñà S/PDIF-in è S/PDIF-out
- 6-è êàíàëüíûé çâóêîâîé âûõîä

Âñòðîåííûå ñåòåâûå ôóíêöèè

- Áûñòðûé Ethernet êîíòðîëëåð Phy
- Âñòðîåííûé èíòåðôåéñ IEEE 802.3, 10BASE-T è 100BASE-TX ñîâìåñòèìûé PHY
- 32-áèòíûé èíòåðôåéñ ìàñòåð PCI
- Âñòðîåííûå ôóíêöèè óïðàâëåíèÿ ïèòàíèåì
- Ïîääåðæêà íà 10 è 100 Mbps
- Ïîääåðæèâàåò IEEE 802.3u auto-negotiation
- Ðàáîòà ÷åðåç øóð óïðàâëåíèÿ

Êîíòðîëëåð PCI IDE Ìàñòåð Øèíû

- Äâà PCI IDE èíòåðôåéñà ïîääåðæèâàþò äî ÷åòûðåõ IDE óñòðîéñòâ
- Ïîääåðæèâàåò æåñòêèå äiñêè ATA/33, ATA/66, ATA/100 è ATA/133
- UDMA Mode 3, 4, 5 è 6 Ðàñøèðåííûé IDE (ñêîðîñòü ïåðåäà÷è äàííûõ äî 133 ÌÁ/ñåê.)

- Ìàñòåðèíã øèíû ñíèæàåò íàãðóçêó íà öåíòðàëüíûé ïðîöåññîð
- Ï îääåðæèâàåò ATAPI CD-ROM, LS-120 è ZIP

IEEE 1394A Interface (òîëüêî 648FX-AL)

- Uses Agere FW803 chip
- Supports three 100/200/400 Mb/sec ports

×èïñåò Socket

- Socket 478

AGP (Accelerated Graphics Port)

- Óíèâåðñàëüíûé AGP ñëîò ï îääåðæèâàåò AGP 8x ñî ñêîðîñòüþ ïåðåäà÷è äàííûõ 2132MB/ñåê è AGP 4x ñ 1066MB/ñåê â 3D ãðàôè÷åñêèõ ïðèëîæåíèÿõ

Ïîðòû Ââîäà/Âûâîäà (I/O) çàäíåé ïàíåëè (ôàéëîâàÿ ãàì ìà ðàçúåì îâ PC 99)

- 2 USB 2.0/1.1 ï îðòà
- 1 RJ45 LAN ï îðò
- 2 DB-9 ï îðòà
- 1 DB-25 ïàðàëëåëüíûé ï îðò
- 1 ìèíè-DIN-6 PS/2 ï îðò äëÿ ì ûøè
- 1 ìèíè-DIN-6 PS/2 ï îðò äëÿ êëàâèàòóðû
- 1 èãðîâîãî/MIDI ï îðòà
- 3 ãíåçäà äëÿ çâóêà: âûõîä, âõîä è ì èêðîôî í

Ðàçúåì Ââîäà/Âûâîäà

- 2 ðàçúåì äëÿ 4-õ äî ï îëíèòåëüíûõ âíåøíèõ USB 2.0/1.1 ï îðòîâ
- 3 ðàçúåì äëÿ âíåøíåãî IEEE 1394A ï îðòà (òîëüêî 648FX-AL)
- 1 ïåðåäíèé àóäèî ðàçúåì äëÿ âíåøíåãî ëèíåéíîãî âûõîäà è ì èêðîôî íà
- 1 âíóòðåííèõ çâóêîâûõ ðàçúåì à (CD-in)
- 1 ðàçúåì S/PDIF-in/out
- 1 ðàçúåì surround
- 1 ðàçúåì äëÿ èíòåðôåéñà IrDA

- 2 IDE ðàçúåìà
- 1 ðàçúåì äëÿ ïîäêëþ÷åíèÿ äâóõ äèñêîâîäîâ äî 2.88Má
- 2 ðàçúåìà ïèòàíèÿ ATX
- 1 Wake-On-LAN (Àêòèâèçàöèÿ íà ñåòåâîå ñîáûòèå)
- Ðàçúåìû äëÿ âíóòðåííèõ ïðîöåññîðà è ñèñòåìíîãî áëîêà

Ñëîòû

- 1 AGP ñëîòîâ
- 5 PCI ñëîòîâ

6.2 Êîìïëåêòàöèÿ

Êîìïëåêòàöèÿ ïîñòàâêè ìàòåðèíñêîé ïëàòû:

- ☑ Ìàòåðèíñêàÿ ïëàòà
- ☑ Ðóêîâîäñòâî ïîëüçîâàòåëÿ
- ☑ Îäèí IDE øëåéô äëÿ æåñòêèõ äèñêîâ ATA/33, ATA/66, ATA/100 èëè ATA/133
- ☑ Îäèí 34-pin øëåéô äëÿ äèñêîâîäà
- ☑ Îäèí CD ñ “Mainboard Utility”
- ☐ Çàäíÿÿ ïëàíêà ñ IEEE 1394A ïîðòà (òîëüêî 648FX-AL) - îïöèîíàëüíî

Åñëè â êîìïëåêòå èç ýòîãî ÷åãî-òî íå õâàòàåò èëè ÷òî-òî èñïîð÷åíî, ïîæàëóéñòà, ñâÿæèòåñü ñî ñâîèì äèëåðîì èëè ïðîäàâöîì.